

Research on Constructing Application System of Exhibition Integrated Information Service Platform in Airport Economic Zone

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Abstract

Information technology has been widely used in the daily management of enterprises. Through the use of it, construct the integrated information service system which is based on exhibition services and takes exhibition organizer, exhibitor and audience as the main service object. Implement digital exhibition service, integrated information service, scientific activity management and customer service network and meet the needs of exhibition service, information service, activity management and customer service. This paper analyzes the service object and domestic demand of exhibition integrated information service system, proposes the system structure of exhibition integrated information service system and analyzes communication platform, operation platform and application platform of the system. Application of exhibition integrated information service system is contribute to realize the interaction among the information flow, capital flow and logistics, implement the purpose of information resources sharing, efficient management and decision science, drive the comprehensive development of enterprise informatization, business electronization, logistics internationalization and supply chain informatization and promote regional economic prosperity and social progress.

Keywords: *Exhibition Industry, Application System, Exhibition Integrated Information Service Platform, System Structure, Network Topology Structure*

1. Introduction

Exhibition industry was first produced in western developed countries, it has been 150 years of history so far from London hosted the first exhibition in May 1851. Information technology has been fully introduced to exhibition industry. The work efficiency of exhibition publicity, investment, exhibitor registration, customer registration and collection of information has been generally improved and the cost has been reduced. Exhibition informatization through exhibition management informatization, exhibition information service and enterprise supply chain informatization has greatly increased the exhibition efficiency and effectiveness, and promote the development of exhibition and related business.

Chinese exhibition informatization still stays in primary level. A large number of exhibition companies inside have no exhibition business management system, large exhibition center has not been equipped with conference and exhibition site management system and online exhibition also has not got the popularization and application. The gap in industrial scale and structure, informatization, specialization and marketization between exhibition economy of our country and developed country is obvious. China's exhibition industry is gradually formed, management level and service level of exhibition industry is improving and the requirements of exhibition informatization are increasingly high. In addition, constantly improvement of information industry technology level and information infrastructure provides a good material and technical basis for the development of exhibition informatization.

The development trend of exhibition informatization is to set up a exhibition integrated information service system which is based on exhibition services and takes exhibition organizer, exhibitor and audience as the main service object. Implement digital exhibition service, integrated information service, scientific activity management and customer service network, meet the needs of exhibition service, information service, activity management and customer service and implement the purpose of information resources sharing, efficient management and decision science. The application of exhibition integrated information service system can strengthen information communication and resource sharing between enterprises of different regions, make the two sides of supply and demand easier to find potential business opportunities, increase cooperation opportunities and reduce transaction costs. Information communication contributes to commodity transaction; commodity transaction drives capital flow and circulation of goods, drives the comprehensive development of enterprise informatization, business electronization, logistics internationalization and supply chain informatization and promotes regional economic prosperity and social progress.

2. System Structure of Exhibition Integrated Service Information System

Exhibition integrated service information system is designed around the goal of digital information resources, exhibition services and related business services network, to realize convention and exhibition business process informatization. It can apply mature technology in the industry at present and emerging IT communications technology haven broad prospects for development(a variety of communication technology integration, XML standard information exchange, network-based call center to achieve, virtual exhibition technology applications, *etc.*) to integrate exhibition integrated service content, including exhibition service, information service, activity management and customer service, providing professional consulting, service and communication. Providing exhibition service, information service, activity management and customer service four platforms integrates efficient and convenient, diversified communication means. Using modern computer network technology package and expand the traditional services content, capabilities and scope and realize the integration, intelligence and networking of exhibition and the information services based on exhibition [1-2].

Exhibition integrated service information system mainly includes: communication service platform, operation service platform, application service platform and security service platform. Among them: communication service platform includes network system, CTI system, SMS system and video conference system. Operation service platform includes server and data backup facilities and operating system, database, middleware, backup software and other system software needed to run. Application service platform includes exhibition service platform, information service platform, activity management platform and customer service platform. Application service includes exhibition business management system, exhibition site management system, trade matching system and online interactive exhibition system of exhibition service platform; information service platform includes information gathering, editing and issuing system, network broadcast system, network interactive system and advertising management system; activity management platform of resource management system, activity plan system, dispatching command system; customer service platform of customer relationship management system, business travel service system, *etc.* Security service platform includes: antivirus, network intrusion detection, network security audit, data backup and other system [3, 4]. Concrete structure is shown in Figure 1.

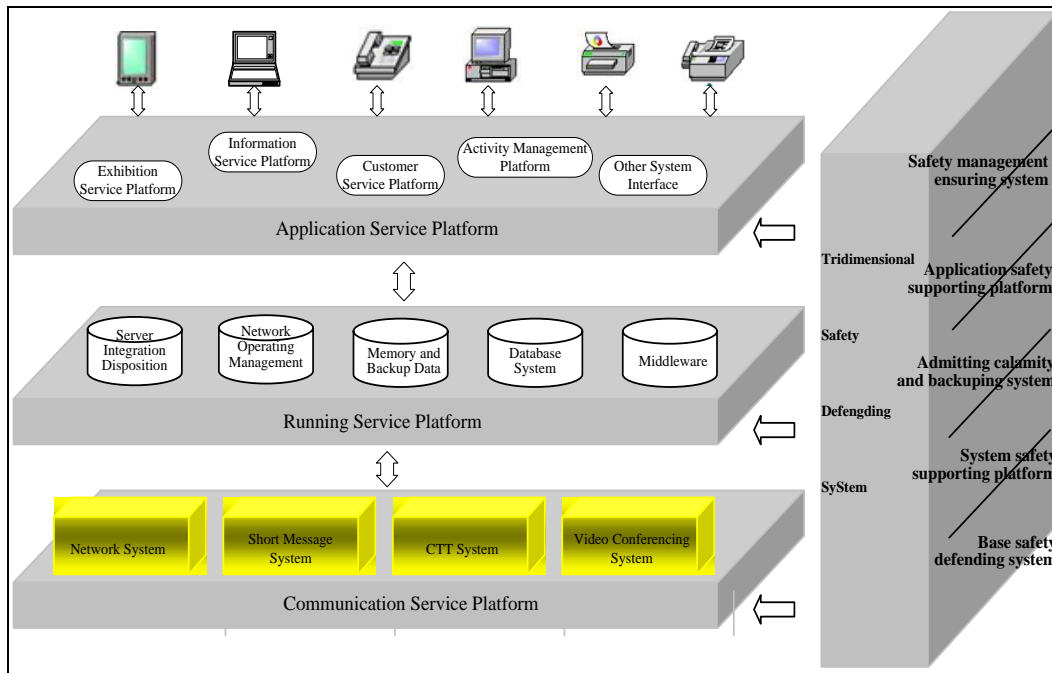


Figure 1. Overall Structure Chart of Exhibition Information Service System

Application service platform: Through consolidation and integration of all kinds of information, data, applications and services existed in internal, make them form all kinds of applications and services faced different service objects, including exhibition service platform, information service platform, activity management platform and customer service platform four big application platform.

Operation service platform: The foundation platform of Supporting the application system running. Include data storage and backup, database system, server integration and configuration, network operation management, as well as application integration system for data exchanging and application system integration.

Communication service platform: Communication platform provides multiple interactive access methods of access system for service object of the system, including the Internet, voice, SMS, video, *etc.*

Security service platform: System security protection system is an important link of the exhibition integrated information service system construction. It covers all aspects of the total application framework system, forming a protection system top-down throughout the entire system platform. Include: security isolation of data store in the running platform, data encryption management in the application integration system(VPN, encrypted transmission), authorization, authentication and signature of application system layer, firewall of communication platform and active intrusion detection, security vulnerability scanning and virus protection, *etc.*

3. Application System Analysis of Exhibition Integrated Service Information System

Application system of exhibition integrated service information system divide into exhibition service platform, information service platform, process management platform and business travel service platform four platforms integrates efficient and convenient, diversified communication means. Using modern computer network technology package and expand the traditional services content, capabilities and scope and realize the integration, intelligence and networking of exhibition and the

information services based on exhibition [5, 6]. Function structure of the application system is shown in Figure 2.

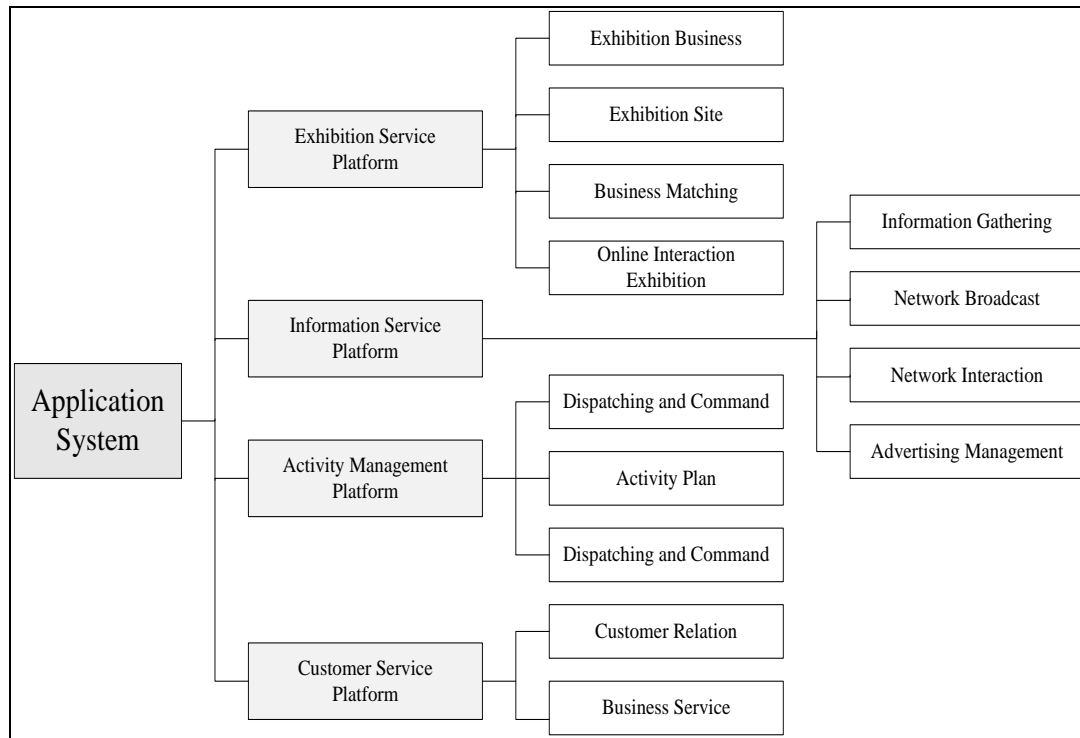


Figure 2. Function Structure of Exhibition Integrated Information Service System

(1) Exhibition service platform

Exhibition service platform includes: exhibition business management system, exhibition site management system, trade matching system and online interactive exhibition system.

Exhibition business management system: Mainly complete exhibition organization and management function, easy to coordinate resources, make good on exhibition organization services and standardized management of attracting investment; summary of various kinds of information resources to analyze, and provide decision support for exhibition organization and services. The main functions of exhibition business management system include event management, attracting investment management, booth management, complaint acceptance and feedback, *etc.*

Exhibition site management system: Exhibition site management system fully considers the disposability of the onsite service site and diversity of organization management mode, completely implement system can be split and flexible combination, and closely combine the onsite service business processes, more convenient to the implementation of the exhibition site service. The main functions of exhibition site management system includes registration management, platform management, exhibition data processing, field complaints and service management and field audience data acquisition, *etc.*

Trade matching system: Commerce database stores the rich business supply and demand information, using efficient and fast database retrieval and data mining

technology, through the intelligent system pair the commerce and trade opportunities, build the bridge between the supply and demand, and through multiple channels, multilingual ways send to the customer. According to the user's industries, content of the project and the purpose, the system automatically analyzes and conducts business intelligence matching according to user's interests, exhibitors according to the system to the simplified project list the system provided read and understand the details of the project and select business matching partner. Intelligence business matching simplifies the time when users see a large number of commercial projects book, improve the efficiency of business matching and business negotiation. The main functions of trade matching system include: negotiation and appointment, scene matching, scene query and screen and schedule printing, *etc.*

Online interactive exhibition system: Online interactive exhibition system using computer virtual reality, the modern information network technology, and the figure, text, sound, image and other rich multimedia presentation, through the Internet fully reveals participation enterprise style and the content of the project, it is an extension and representation of the exhibition reality show on the Internet, really is not limited by form, scale, location, distance and exhibitor personnel, and build online "never ending" fair.

Online interactive exhibition system provides all previous exhibition video on demand through WEB remote, exhibition live, virtual display interaction and other functions. Customers use all kinds of terminal record virtual server and watch the video information of all previous exhibition and exhibition live [7]. The system structure of online interactive exhibition is shown in the figure 3.

(2)Information service platform

Information service platform includes information collecting and editing system, live online management system, network interaction system and advertisement management system.

Information collecting and editing system: Information collecting and editing system is mainly to complete the collection, arrangement, examination and approval and release of the related information of exhibition. Include information gathering and editing, web information publishing and full-text retrieval function module.

Live online management system: The main function of live online management system is using advanced network transmission technology and multimedia coding technology, to show various exhibition related resources of online multimedia forms for customers at any time. Live online system is mainly divided into image-text live and video broadcast two forms [8].

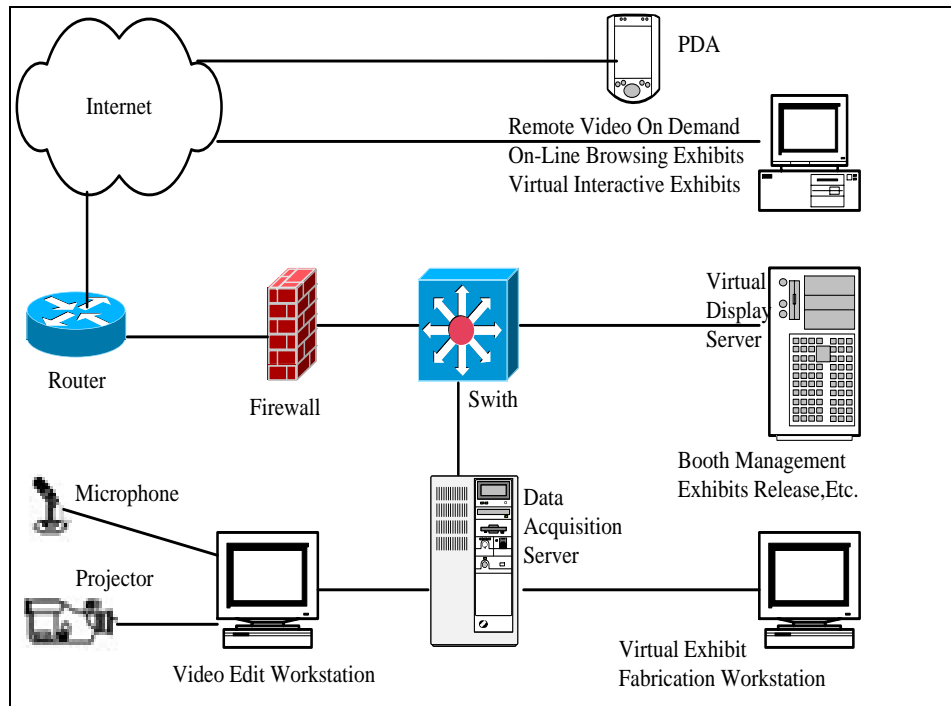


Figure 3. System Structure of Online Interactive Exhibition

Network interaction system: Network interaction system includes mail subscription system; SMS service system and guest chat room three parts.

Advertisement management system: The main function of advertisement management system includes advertisement information management, advertisement booking management function module, *etc.* The main contents of advertisement information management module are information collection, maintenance and query. Managers gather the information of advertising text and images and storage in the database, through the query and maintenance module to delete, modify and other maintenance operations of advertising information [9, 10]. Exhibitors and other customers can via internet and other forms submit application of advertisement booking, internal communication system sends the untreated information to the relevant management personnel, to make the customers advertising booking application accept in a timely manner. Customers can also through Internet, voice, SMS and other ways track the status of advertising booking application.

(3) Activity management platform

Activity management platform mainly includes resource management system, activity plan system and scheduling command system.

Resource management system: The main function of resource management system is to manage the related resources information of exhibition, master all kinds of resources utilization, the idle condition and state and make managers can conveniently, quickly and accurately allocate resources through the system. Resource management system functions mainly include: personnel vehicles plan management, transportation resources management, hotel resources management, catering resources management, important public places resources management, health resources management.

Activity plan system: The main function of activity plan system is using project management software auxiliary manage the schedule, cost, quality, risk, scope, and other fields of each stage of work(including the schedule plan edit, implement, control and delivery operation, *etc.*), conduct organization, coordination, communication, modification and monitoring management activities. Management contents involve engineering, technology, exhibition services, market development, news propaganda, personnel, environment and a wide range of professional fields [11].

Using activity plan system can arrange optimized, detailed and layered total schedule, plan of activity, making the schedule covers the all aspects of the preparation, organization, implementation and operation of activities, and then dynamically follow, analysis and control the actual progress of the activities.

Scheduling command system: Scheduling command system function is through the use of city emergency linkage system of the exhibition city centre.

(4)Customer service platform

Customer service platform mainly includes customer relationship management and business travel service system.

Customer relationship management system: Aiming at participating merchants, guests provide completely personalized integrated information consultation service, the staff at the right time in the proper way provides appropriate service contents to service objects and enable customers to create a good impression of home. Service contents include: scheduling consultants; schedule appointment reminder; shopping tour guide; business activity notice; greetings and care; business agent; telephone return visit, *etc.*

Customer relationship management can be done through the call center system. Call center system is the system highly integrated by various modern communication means, realizing powerful functions including telephone, fax, email, voice, web browsing and SMS. Relying on the business database and service facilities information database, through high-quality business representatives, provide 7 x24 hours multilingual and personalized integrated information service including exhibition information consultation, product introduction, business arrangement, booth reservation. By VoIP technology establish remote position or sub-centre, remote position representatives in their native language provide telephone voice information consulting services for domestic customers [12]. Call center system structure is shown in the figure 4.

Business travel service system: Provide travel, transportation, hotel, catering and other service facilities information query and booking service for participating merchants. For expo participating merchants, guests and customers provide completely personalized electronic secretarial services, contents include: scheduling consultants; schedule appointment reminder; shopping tour guide; business activity notice; greetings and care; business agent; telephone return visit *etc.*

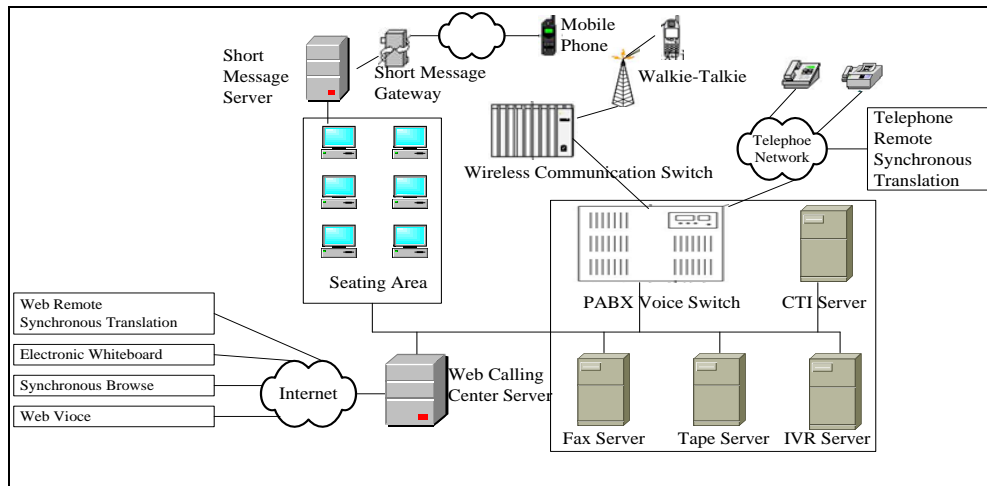


Figure 4. Call Center System Structure

5. Conclusion

Using information technology construct exhibition integrated information service system and integrated information service platform which is based on exhibition and takes regional enterprises as the main service object, to realize the regional enterprise integrated information service resources digitization, exhibition services, business services and logistics service network, integrated information service scientization and internationalization and to achieve the goal of regional enterprise integrated information service sharing, scientific decision-making and management efficiency. The application of exhibition integrated information service system can give play to the leading role of exhibition information service and technology, drive the realization of regional enterprise business process informatization, promote the coordinated development of regional enterprise supply chain, promote regional economic development, drive the application of small and medium-sized enterprise information technology, to further improve the level of enterprise information technology application, effectively enhance the competitiveness and innovation of small and medium-sized enterprises.

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